



Launch Mission Execution Forecast

Mission: Falcon 9 Starlink-L27

Issued: 7 May 2021 / 0830L (1230Z)

Valid: 9 May 2021 / 0142 – 0334L (0542 – 0734Z)



Forecast Discussion: High pressure has begun to work its way across central Florida in the wake of frontal passage overnight Thursday. Northwesterly low level winds are bringing in slightly cooler and drier air to the Space Coast. The high pressure ridge is expected to remain in control of the weather across central Florida into the weekend and should provide favorable conditions for the primary launch day. It is possible that there will be some cumulus clouds out over the water during the launch attempt. At this time, these clouds do not appear to pose a significant threat for lift off. The main weather concern for the primary day will be from the Cumulus Cloud Rule.

In the event of a delay, a storm system over the central US moves into the Mississippi Valley late Sunday into early Monday morning. As this happens, the surface pressure gradient tightens and this will cause winds to increase. This will occur both at the Space Coast as well as the recovery area. As with late Saturday/early Sunday, expect scattered cumulus clouds. The primary weather concerns for Monday morning are the Cumulus Cloud Rule as well as Liftoff Winds.

Launch Day	Probability of Violating Weather Constraints							
	20%	Primary Concerns: Cumulus Clouds Rule						
	Weather Conditions					Additional Risk Criteria		
	Weather/Visibility:	None / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	LOW
	Temp/Humidity:	68°F / 78%	Cumulus	Scattered	2,500	4,000	Booster Recovery Weather:	LOW
	Liftoff Winds (200’): 120° 10 - 15 mph					Solar Activity:	LOW	
24-Hour Delay	Probability of Violating Weather Constraints							
	30%	Primary Concerns: Cumulus Clouds Rule, Liftoff Winds						
	Weather Conditions					Additional Risk Criteria		
	Weather/Visibility:	None / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	LOW
	Temp/Humidity:	73°F / 86%	Cumulus	Scattered	2,500	4,000	Booster Recovery Weather:	MOD
	Liftoff Winds (200’): 160° 15 - 20 mph					Solar Activity:	LOW	
Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.								
Next Forecast Will Be Issued		8 MAY 2021						